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BRYOPHYTES OF THE MOUNT GREYLOCK REGION V

A. LeRoy Andrews

Long ago in the early years of Rhodora (Vols. 4–11, 1902–09) I published four instalments of lists of bryophytes of the Mt. Greylock area in northwestern Massachusetts, the results of many collecting trips from my home in Williamstown. The last trip covered was that of Oct. 1, 1908. But further ascents of the mountain in vacation periods of 1909, 1910 and 1911, as long as the family home was maintained in Williamstown, yielded some further species and it has occurred to me for completeness' sake to bring these together and present them in a belated fifth instalment.

Ascent by way of the slide on the Adams side did not at that time yield much of bryophyte interest, but ascents by brook beds were still productive, especially the branches of the Hopper Brook, and the Notch with its limestone exposure still furnished calciphile species. The list does not yet claim to be exhaustive, but should give a fairly good idea of the bryophyte flora of the region, which with the highest elevation of the state could be expected to contain some elements rare or not otherwise occurring in Massachusetts.

American interest in bryology has progressed far since these early publications and in some cases the names have been superseded by other synonyms, but in such cases identity will be recognized without further revision. I would only call attention to a few cases where subsequent investigation make correction necessary. For example Grout has established the fact that what had been called *Buxbaumia indusiata* Brid. in America is distinct from the European species and it should accordingly

be corrected to *B. subcylindrica* Grout. Similarly *Pohlia* (also called *Webera*) *proligera* Lindb. was long confused with a variety *decipiens* Loeske of *P. annotina* (Hedw.) Loeske. The *Pohlia* (or *Webera*) *proligera* should then be stricken from my list as I have not seen the true species from Mt. Greylock. On the other hand Frye and Clark in their compilation of the Hepaticae of North America have for some unaccountable reason made my report of *Asterella tenella* (L.) Beauv. (listed as *Fimbriaria*) the basis for a record of *A. Ludwigii* (Schw.) Und. from Massachusetts. According to the publications of Evans, *A. Ludwigii* does not occur in New England or anywhere near it and the *A. tenella* of my list was certainly correctly identified.

The new list follows, arranged alphabetically as before, and without further notes.

Musci

Amblystegiella confervoides (Brid.) Loeske
Amblystegiella subtilis (Hedw.) Loeske
Amphidium lapponicum (Hedw.) Schimp.
Brachythecium Novae-Angliae (Sull. & Lesq.) Jaeg. & Sauerb.
Bryum pendulum (Hornsch.) Schimp.
Cratoneuron filicinum (L.) Roth
Fissidens osmundoides (Sw.) Hedw.
Gymnostomum aeruginosum Sm.
Gymnostomum curvirostrum (Ehrh.) Brid.
Hypnum molluscum Hedw.
Mnium orthorhynchum Brid.
Orthotrichum obtusifolium Schrad.
Pohlia Rothii (Correns) Broth.
Pterigynandrum filiforme (Timm) Hedw.
Rhacomitrium heterostichum (Hedw.) Brid.
Trichostomum tenuirostre (Hook. & Tayl.) Lindb.

Sphagna

Sphagnum fuscum (Schimp.) Klinggr.
Sphagnum Warnstorfianum DuRietz
Sphagnum robustum (Russ.) Röll

Hepaticae

Cephalozia catenulata (Hueb.) Spruce
Cephalozia pleniceps (Aust.) Lindb.
Lophocolea minor Nees
Lophozia bicrenata (Schmid.) Dum.
Lophozia Helleriana (Nees) Boul.
Lophozia porphyroleuca (Nees) Schiffn.
Nardia obscura Evans
Riccardia multifida (L.) Dum.
Riccardia pinguis (L.) Gray
Scapania mucronata Buch

ADVENTITIOUS AND ESCAPED PLANTS NEW TO MISSOURI

VIKTOR MÜHLENBACH

DURING the summers of 1954 and 1955 the writer collected plants on the rights-of-way of different railroads in St. Louis in preparation for a comprehensive adventitious flora of this city. The number of adventitious species and those escaped from cultivation totaled almost two hundred. At the suggestion of Dr. Julian A. Steyermark those plants which have not been previously recorded are being published in the following list. After omitting three or four species not readily determinable without further study, these totaled sixteen. They were, without exception, collected in the city limits of St. Louis. The writer wishes to express his appreciation for the determination, or in other cases for the verification of his identification, of the plants in question to Dr. Edgar Anderson, Dr. H. Merxmüller (Munich), Dr. Reed Rollins, Dr. G. B. Van Schaack, Dr. J. A. Steyermark and Dr. J. R. Swallen. Specimens verifying these records have been deposited in the herbaria of the Missouri Botanical Garden and the Chicago Natural History Museum.

Bromus rigidus Roth. This Mediterranean grass is a common weed in the western states, while it is only seldom introduced or adventive in the other parts of the U.S.A. It has apparently not yet been reported in any of the neighboring states to Missouri. According to Gray's Manual and Hitchcock's Manual of Grasses the nearest points at which it has been reported are in Texas, Mississippi, Virginia and Maryland. It was found in the Bremen Avenue freight yard of the Terminal Railroad, several hundred meters north of the station on a large waste place between the central and western tracks. There was only one plant, but it was a large and well developed specimen, May 30, 1955 (*V.M. 614*). The herbarium of the Missouri Botanical Garden contains one wretched specimen of this plant with only a few spikelets from Missouri. Evidently this collection has not been reported previously. The data are "Courtney, Mo., July 1, 1904 (*B. F. Bush 2067*)."

Festuca arundinacea Schreb. This European grass seems to be even rarer than the above. Gray's Manual did not mention it at all, although Hitchcock cites it from Ohio and Michigan. A few plants were found on a stone ramp covered with vegetation near to the Rutger Street Warehouse, May 14, 1955 (*V.M. 576*).

Puccinellia distans (L.) Parl. This Eurasian grass is mainly met with

in eastern and western states. In the central states there are records only from Wisconsin and Michigan. A small colony was discovered 100–200 meters north of the Municipal Bridge between the right-of-way of the Terminal Railroad and the Mississippi River levee, May 23, 1954 (*V.M. 70*). It was not found again in the summer of 1955.

Panicum texanum Buckl. A native plant of Texas, it has been introduced at several localities, especially in the southern states. According to Hitchcock's Manual, the nearest points to Missouri are in Oklahoma, Mississippi and Alabama. Gray's Manual does not mention it at all. The plant resembles *Panicum miliaceum* L. which also occurs in St. Louis and was at first mistaken for it. Only a few plants were found in Baden freight yard of M.-K.-T. Railroad, along the most western siding (near Dodridge Ave.), October 22, 1954 (*V.M. 517*). It was not observed again in the summer of 1955.

Miscanthus sinensis Anderss. While the adventitious nature of the grasses mentioned above is not questionable, the situation of this Eurasian plant seems to be otherwise. It is often cultivated for ornament because of its showy appearance. Occasionally it escapes from cultivation and naturalizes. A map in Hitchcock's Manual shows a half-a-dozen states where it is found growing wild. The nearest known points are in Texas and Alabama. Gray's Manual also mentions Ohio. In St. Louis, it has been found in the railroad yards twice: opposite the Hussmann Refrigerator Company plant, along the right-of-way of the Terminal Railroad, between West Florissant Ave. and Broadway, October 1, 1955 (*V. M. 822A*); Carrie Avenue freight yard of the Rock Island Railroad, in the northeastern corner, about 100 m. southeast of the station, November 27, 1955 (*V. M. 860*). At both localities only a few plants were found.

Erianthus Ravennae (L.) Beauv. The situation of this European grass is like that of *Miscanthus sinensis*. It is also cultivated for ornament; it also escapes from cultivation, but is rarer than the previous species. Gray's Manual mentions this grass as becoming naturalized from Maryland southward and Hitchcock's Manual as established in Arizona. It was discovered along the ditch west of the right-of-way of the Burlington Railroad, north of East Grand Ave., just opposite Cemco Manufacturing & Supply Company's building, October 17, 1954 (*V. M. 500*). There were two specimens almost 3 m. tall. As they grew in huge clumps, one of them almost 120 cm. in diameter, it may be presumed that both plants had persisted for some time. They were also observed through the summer of 1955. They could be considered to be naturalized, but the locality is a dangerous one for plants because they could be easily destroyed. The presence of *Althaea rosea* Cav. and of cultivated irises in the near vicinity suggest their origin as escapes; on the other hand, it is worthy of mention that the big elevator of the Norris Grain Corporation is only a few hundred meters north of the locality and that the area around this elevator is particularly rich in adventitious species.

Sorghum vulgare Pers. var. **technicum** (Koern.) Jav. (broomcorn). This variety of sorghum which furnishes the material for brooms, was

discovered by Dr. Edgar Anderson. The station was in the North St. Louis freight yard of the Burlington Railroad, along the highway which branches off the foot of Carrie Avenue to the north, August 6, 1955 (*V. M. 711*).

Silene dichotoma Ehrh. This Eurasian plant is, according to Gray's Manual and Britton and Brown's Illustrated Flora, widely distributed as a weed in the U. S. A. The data for the first record of this plant for Missouri is right-of-way of the Burlington Railroad, between East Grand Ave. and Ferry Street along the sidings. Only one specimen was found, July 9, 1955 (*V. M. 672*). The specimen was badly damaged by a sprayed weed killer, but it was still identifiable.

Spraying weeds is a widely followed practice by all the railroads in St. Louis. It was carried out in the beginning of July the last summer. The consequence was generally disastrous for the plants of the railroad tracks. The vegetation does not recover at all in very many places. In other places annuals gradually appear after a considerable time. Apparently perennials suffer least. The parts above ground mostly perish, but later they begin to come up again from roots, rhizomes, etc. Some of them even manage to produce flowers and fruits later in the same season.

Cardaria pubescens (A. Mey.) Jarm. This presumably Asiatic plant is, according to Gray's Manual and Britton and Brown's Flora, quite common in northwestern states, but apparently much rarer in other parts of the country. The nearest point to Missouri is in the state of Michigan. The data are: Lesperance Street freight yard of the Terminal Railroad between Victor and Rutger Streets, several hundred meters south of the station. One specimen, May 23, 1954 (*V. M. 62*). The plant resembles strongly the more frequent European *Cardaria Draba* (L.) Desv. The latter also occurs in St. Louis and has developed two isolated but dense stands. This growth in dense mats is very typical for *C. Draba* in Europe. According to G. Hegi (Illustrierte Flora von Mittel-Europa) the abundant vegetative proliferation usually forms colonies with a large number of individuals. On the contrary, only a single specimen of *Cardaria pubescens* was found in St. Louis. It was not observed again in the summer of 1955.

Raphanus Raphanistrum L. This also is a very troublesome weed in many parts of Europe, established, according to Gray's Manual and Britton and Brown's Flora, in many states of the U. S. A. Up to the present, it has not been recorded for Missouri. The data are: North St. Louis freight yard of the Burlington Railroad, in the northwestern corner, just south of Humboldt Ave., opposite the engine house of the yard. One specimen, May 30, 1955. (*V. M. 620*). The plant is quite young and does not show the typical fruit form. Nevertheless, the sepals of fully developed flowers which are all strictly erect, the outer being saccate, confirm the identification.

Sisymbrium Loeselii L. This Eurasian plant is, according to Gray's Manual and Britton and Brown's Flora, only local and occasional in our

range, while becoming a weed in the western states. The data of collections are: Lesperance Street freight yard of the Terminal Railroad south of the signal-box Carroll Street Tower. Only a single specimen, badly damaged and covered with grease, June 19, 1954 (*V. M. 183*). Not observed at the same station in the summer of 1955. Carrie Avenue freight yard of the Terminal Railroad. Four specimens, more or less isolated, mostly in the northern part of the yard, south of Humboldt Ave., May 8, 1955 (*V. M. 570*).

Lathyrus hirsutus L. This plant of southern Europe is seldom met with in the U. S. A. Gray's Manual gives the distribution as "Virginia to Alabama and Mississippi." A small colony, closely intermingled with *Vicia dasycarpa* Ten. was discovered in St. Louis on the right-of-way of the Frisco Railroad between Macklind Ave. and Evens and Howard Sewer Pipe Company's plant, along a siding, May 29, 1954 (*V. M. 96*). In spite of careful and repeated search in the summer of 1955 it was not possible to find it there again.

Hedera Helix L. The only shrubby plant in this list and a native of Europe, *H. Helix* is very often cultivated in this country. According to Gray's Manual and Britton and Brown's Flora it has occasionally escaped and partly established itself in Virginia and southward. Now it seems that this ornamental plant is also established in St. Louis in the Lindenwood freight yard of the Frisco Railroad, on the northeastern embankment of the Fyler Bridge, in the vicinity of the engine house. September 10, 1955 (*V. M. 764*). Its growth is more or less prostrate and it must have been there for some time, judging by its abundance.

Solanum tuberosum L. Escapes of common cultivated plants are often overlooked. This species has not been recorded for Missouri. It was found on the right-of-way of the Terminal Railroad just opposite the Continental Grain Company's Brooklyn Street elevator. One specimen, without flowers, probably because the collection date was an early one, May 15, 1955 (*V. M. 584*).

Petunia axillaris (Lam.) BSP. This often cultivated South American plant was found by Dr. E. Anderson. It grew on a dumping ground between the right-of-way of the Wabash Railroad and the Waterworks conduit track, north of Adelaide Ave., August 6, 1955 (*V. M. 707*). The herbarium of the Missouri Botanical Garden contains a specimen of this species from Missouri not previously reported. The data are: Collier St., Hannibal, Mo., R. R. banks, *Rev. John Davis 7517*.

Franseria discolor Nutt. North St. Louis freight yard of the Burlington Railroad, in the northwestern corner, along the sixth siding counted from the crew house in the southeast direction from the latter, August 14, 1954, September 19, 1954, September 18, 1955 (*V. M. 349, 439 & 809*) all from one quite large colony; Carrie Avenue freight yard of the Rock Island Railroad, in the southeastern part along the eastern sidings, just opposite the engine house, August 28, 1955 (*V. M. 738*). This plant is the only one in the list which could be native to Missouri. Gray's Manual gives the habitat and the range of it as, "Dry sands and plains,

Wyoming to Arizona, locally east to Illinois." The herbarium of the Missouri Botanical Garden contains two sheets of it from Illinois from McHenry County and from the vicinity of Ottawa in the valley of Illinois. At both places where I collected *F. discolor*, there were many adventitious plants in the vicinity, so it seems that in our case it is an adventitious rather than a native plant.—SAINT LOUIS MISSOURI.

PLANTS NEW TO ILLINOIS AND INDIANA AND THE CHICAGO REGION

JULIAN A. STEYERMARK, FLOYD A. SWINK, AND JOHN W. THIERET

SINCE the publication of The Vascular Plants of Illinois,[1] the authors have found the following records which are of particular interest, as either new to Illinois or Indiana or to the flora of the Chicago area. All specimens are deposited in the herbarium of the Chicago Natural History Museum.

1. ADDITIONS TO THE FLORA OF ILLINOIS

Beckmannia syzigachne (Steud.) Fern. In their Vascular Plants of Illinois, Jones et al. record this species only from Clyde, Cook Co., the collection by L. M. Umbach. This station is now destroyed. However, the species has recently been collected in the state. The data for the new record are as follows: marshy ground on the south shore of Loon Lake near the village of Loon Lake, Lake Co., July 23, 1955, *Swink 2772*.

Miscanthus sacchariflorus (Maxim.) Hack. This eastern Asiatic ornamental grass, not included in the Eighth edition of Gray's Manual, is reported in the Hitchcock-Chase Manual of the Grasses of the United States as an escape in Clinton County, Iowa. Mr. Chester E. Hansen, faculty member at the Oak Park (Illinois) High School, recently collected the grass in Muscatine County, Iowa, and Rock Island County, Illinois. This Rock Island County collection and an earlier collection by the senior author[2] at Glen Ellyn, Du Page County, Illinois, constitute the first records for this state. The data for these collections are: in ditch along an improved road just east of Mississippi River, about 1 mile south of route 92, Rock Island County, Sept. 5, 1955, *Hansen 4;* vacant lot just south of 215 Lorraine Road, Glen Ellyn, Du Page Co., Oct. 30, 1951, *Steyermark 73078*.

Polygonum cespitosum Blume, var. **longisetum** (De Bruyn) Stewart. Although this has been noted in backyards and gardens in Chicago,

[1] Jones, Geo. Neville, Fuller, Geo. D., Winterringer, Glen S., Ahles, H. E., & Flynn, Alice A. Vascular Plants of Illinois. 46. 1955.

[2] Steyermark, J. A. Bull. Chi. Nat. Hist. Mus. 23 (3): 5. March, 1952.

only the following collection is extant: Elmhurst, Cook Co., July 21, 1949, *Swink* s.n.

Veronica longifolia L. Two spontaneous collections of this cultivated garden species have been found: open ground on the south side of North Avenue in approximately the 8700 block, Melrose Park, Cook Co., June 26, 1955, *Swink 2770;* Thatchers Woods Forest Preserve, River Forest, 1937, *Gordon Pearsall.*

Viburnum Lantana L. This cultivated species has been found to occur spontaneously and away from any near habitation at the following natural wooded area: woods of York Forest Preserve south of Elmhurst, Du Page Co., Nov. 5, 1955, *Swink 2782.*

Aster laevis L., forma **Beckwithiae** House. The data for this collection are: Palatine, Cook Co., Sept. 24, 1938, *H. C. Benke 5945.*

Aster puniceus L., forma **candidus** Fernald. This white-flowered form has been collected at Elgin (north part), Kane Co., Oct. 1, 1928, by *Benke 4835.*

Sanvitalia procumbens Lam. This species was collected as an escape from cultivation at the following locality: corner of Stewart Avenue and 67th Street, Chicago, Cook Co., Sept., 1938, *Lorraine Engelhardt.*

Helianthus salicifolius A. Dietr. A large colony of this western species for a number of years has been dominating a field where it was first noted by Mrs. Julian Steyermark. It is well established and about five hundred plants occur at this locality: at northeast corner of Dempster Street and Major Avenue, just west of Eden's Expressway and east of Morton Grove, Cook Co., Oct. 14, 1955, *Steyermark 80329.*

Arctium minus (Hill) Bernh., forma **pallidum** Farw. Two collections of this form are known: Jefferson Park, Cook Co., August 4, 1941, *Benke 6134;* vacant lots in Kankakee, Kankakee Co., August 1, 1913, *Arthur W. De Selm 409.*

2. Additions to the Flora of Indiana

Aristida basiramea Engelm. This grass has not been reported previously from Indiana. The collection data are as follows: locally common along railroad tracks east of Grant Street, south of 9th Avenue, Gary, Lake Co., July 31, 1955, *Thieret 1498.*

Gypsophila scorzonerifolia Ser. The collection, here cited, apparently the first record of this species as an escape in the United States, was made in Lake County, Indiana. A dense colony of the plant was discovered extending some 120 feet along the railroad tracks on the east side of Gary. As the collection of *Gypsophila* in the herbarium of the Chicago Natural History Museum was not adequate for critical study, material was sent to the Royal Botanic Gardens at Kew, where it was identified as *G. scorzonerifolia.* The data for the collection are: dense colony extending for 120 feet along New York Central railroad tracks just north of highway 12, 1.5 miles east of Lake Street, Gary, Lake Co., July 2, 1955, *Thieret 1404.* The plant was observed to be a glaucous perennial with 3-nerved leaves (except the upper ones), flowers white

with a pink tinge, 6–7 mm. across, 5 mm. long, the petals somewhat less than twice as long as the sepals, and the pedicels glandular-pubescent.

3. Additions to the Flora of the Chicago Region

The following records were not included by Jones et al. in their Vascular Plants of Illinois or have been collected since the work was in press.

Populus canescens (Ait.) Sm.

The data for this collection are as follows: open ground of Illinois Beach State Park, south of main parking lot near Lake Michigan, north of Waukegan, Lake Co., Sept. 10, 1955, *Swink 2780*.

Dianthus deltoides L. This has been collected at the following locality: openings in level woods, Aurora, Kane Co., 1937–38, *Gordon Pearsall*.

Silene regia Sims. The following specimen collected in northern Illinois is considerably north of its known range: roadside, highway 45, Will Co., July 24, 1931, *Carl Buhl 395*.

Paronychia fastigiata (Raf.) Fernald (typical). The data for this collection are: Riverside, Cook Co., Sept. 26, 1885, *W. C. Ohlendorf*.

Lotus corniculatus L. The data for this collection are: Hopkins Park, Kankakee Co., July 15, 1955, *Karl Bartel*.

Eupatorium coelestinum L. The data for this collection are: Forest preserve near Riverside, Cook Co., 1937–38, *Gordon Pearsall*.

Hypochaeris radicata L. The data for this collection are as follows: Arlington Heights, Cook Co., Sept. 10, 1929, *H. C. Benke 4929*. The 1929 collection is apparently the earliest record noted for this species in the Chicago area. It has been seen since in and around the city of Chicago along highways and boulevards, but the regular mowing along these highways prevents the plants from flowering.—Chicago Natural History Museum and College of Pharmacy, University of Illinois, Chicago.

CAREX MOLESTA IN MASSACHUSETTS

Richard J. Eaton

Among a number of specimens collected some years ago and set aside for later study is a *Carex* § *Ovales*. By using Fernald's key in Gray's Manual 8th Ed., it seemed to run down to *C. molesta* Mackenz. unequivocally. However, this species is not represented at all in the herbarium of the New England Botanical Club, and by specimens in the Gray Herbarium (annotated by Fernald in 1941) from only two New England stations: one from Lake Champlain, Vermont, and one from Hartford County, Connecticut. In contrast, there are specimens from seventeen localities in New York State. Being unfamiliar with it myself, I decided to solicit expert opinion from Drs.

H. K. Svenson and F. J. Hermann. They are in agreement that my specimen should be referred to *C. molesta*, although Dr. Hermann writes that it is not typical compared with the plant of the mid-West. Accordingly, I am placing it in the Club Herbarium under that name, with the accompanying data: Moist field in rear of Old Manse, Concord, Massachusetts, *R. J. Eaton*, 17 June 1934. It is annotated by Hermann as "atypical".

When Mackenzie (1931) published *C. molesta* he cited the type collection as from Wyandotte County, Kansas, and the distribution: "Dry woodland, N. Y. to Kansas and Nebraska", omitting any reference to its nearest affinities. However, his key clearly indicated that he considered *C. brevior* to be its closest relative and separable from it chiefly by the shape, texture and nervation of the perigynia. He placed it in a group of closely allied species of the series Festucaceae in the following order: *C. tenera*, *C. tincta*, *C. normalis*, *C. festucacea*, *C. molesta*, *C. brevior*. This order, incidentally, is followed in Gray's Manual.

Gates (1940) reduced it to an infraspecific status as *C. brevior molesta*. Fernald (1950), whose knowledge of *Carex* in the Gray's Manual range was profound, maintained the species but with a broader concept of its definition and range. He amplified Mackenzie's description in respect to key characters and stated its distribution to be "dry or slightly moist open ground, borders of woods, etc., Mass. and Vt. to Sask., s. to Del., D. C., Tenn., Ark., Kans., and Colo." Gleason (1952), on the other hand, following Gates, united *C. molesta* with *C. brevior* as scarcely specifically distinct, and even suggested that the former might be a hybrid with *C. normalis*.

Dr. Hermann writes me that in his experience the two are sharply distinct in the mid-West and as far east as Pennsylvania and western New York, but in New England transitional forms, mostly referable to *C. brevior*, seem to be the rule. However, in 1954, he collected *C. molesta* in Litchfield County, Conn., at what appears to be the second known station for the species in that state.

At the Gray Herbarium there are about 102 sheets in the *C. molesta* folders, of which 49 were annotated "C. brevior, K. M."

(presumably in 1915 or thereabouts) and re-annotated "C. molesta M. L. F. 1941" (7 merely bearing the words "C. molesta" in Fernald's handwriting). There are 16 additional sheets annotated by Fernald, but apparently not seen by Mackenzie. With a very occasional exception all this material had been originally determined as C. (spp.) var. brevior. Thus there seems to be ample material, even at a single institution, on which to base a judgment about the proper rank to assign to this taxon. Also, it seems reasonable to infer that *C. molesta* is in actuality a taxonomic segregate from *C. brevior*, despite Mackenzie's silence on the point.

Judging from its representation in the Gray Herbarium, the New York Botanical Garden and the National Herbarium, *C. molesta* is rare east of the Hudson River. I have been unable to trace Fernald's authority for including Massachusetts in its range. That it should turn up in Concord emphasizes again the truism that novelties are always possible even in the most thoroughly botanized localities.

Apropos Gleason's tentative suggestion that we are possibly dealing with a hybrid between *C. normalis* and *C. brevior*, it is well to bear in mind that hybrids in the genus *Carex* are generally considered to be rare and almost always infertile. The ample material at the Gray Herbarium is quite inconsistent with such a hypothesis in the case of *C. molesta*. There appears to be little reason for not accepting Dr. Hermann's conviction that it is a distinct and stable species west of New York, with transitional forms confined chiefly to the northeast periphery of its range. This is contrary to expectation were we dealing with a hybrid. In this connection I have secured his permission to quote from a recent letter to me as follows:

"But no such theory (hybridity) is required, it seems to me, to explain the prevalence of transitional forms in a part of the geographic range of a taxon and their absence from other parts. It is rather generally held, I believe, that in the origin of species, whether the means be hybridity, natural selection or any others, the change is gradual (except in cases of mutation). The differences between daughter- and parent-species are at first bridged by innumerable intermediary types, so at this stage we have not distinct species but a variety or, as the moderns prefer to dub it, a subspecies. Later when the transitional forms have either entirely disappeared, or practically so except in a local section of its total area,

the taxon becomes a species. (This concept is pretty well developed by G. Einar Du Rietz in his "Fundamental Units of Biological Taxonomy", Svensk Botanisk Tidskrift 24: 333–428. 1930.) So when a species has not quite become finally demarcated, as in the case of *C. molesta*, an occasional intermediate is to be expected and such intermediates are quite likely to be concentrated in some portion of its geographic range. In my experience they seem to occur chiefly at the periphery of the range, at the portion relatively recently invaded by the species and farthest from its center where it has been longest established and where the distinctions are most pronounced and stable (in this case Kansas and Nebraska). A similar case is that of *Juncus dudleyi* which, although amply distinct from *J. platyphyllus* in the New England States, breaks down completely in the Southwest where transitional forms outnumber the sum of extremes."—LINCOLN, MASSACHUSETTS.

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A NEW SPECIES OF TERNSTROEMIA FROM JAMAICA, B. W. I.

Clarence E. Kobuski

Botanically speaking one of the least explored areas on the island of Jamaica is the John Crow Mountain range in the parish of Portland at the eastern end of the island. This range, a rugged limestone tilted plateau, reaches an elevation of 3800 ft. No roads cross it and even access to its slopes is limited to trails. Because of their location the John Crow Mountains are the first to intercept the rain laden northeast trade winds and for this reason the rainfall in the mountains is heavy. Reasonable estimates place the annual rainfall near the crest at 300 inches while even the driest location near the coast at Priestman's River where records are kept reveal an annual precipitation of 100 inches. The heavy rainfall has eroded the limestone rock into a treacherous dogtooth or honeycomb surface which makes travel both dangerous and exhausting. For reasons of limited accessibility, difficult travel and heavy rains, few botanists have ventured in the John Crow Mountains and relatively few botanical records are available. Britton

and Harris have collected the lower slopes especially at the southern end, and more recently George Proctor of the staff of the Institute of Jamaica has crossed the range and made several other excursions toward the crest of the mountain mass. One of the most interesting approaches has been from the land settlement area at Ecclesdown. The approach to the mountains follows a trail leading to areas of limited cultivation, beyond which are blaze marks leading to an erosion valley on the escarpment. A rugged climb up this valley brings the botanist to an eastern shoulder of the John Crow Mountains, an area of a most interesting stunted mossy or elphin forest. George Proctor has collected alone in this area several times, and at other times has had the company of Richard A. Howard. Each trip during the varying seasons of the year seems to have yielded new species or species new to Jamaica, as well as range extensions for Jamaican endemics. The following new species of *Ternstroemia* was collected by Howard and Proctor on their most recent trip to this area in September of 1956, and is named for Professor Howard.

Ternstroemia howardiana Kobuski, sp. nov.

Arbor 4 metralis, ramulis verticillatis, rugosis, glabris, teretibus, striatis, griseis. Folia apice ramulorum congesta, coriacea, glabra, obovata, 4–7 cm. longa, 2–4 cm. lata, apice rotundata vel late obtusa, basi cuneata vel attenuata, subtus pallidiora, margine plana (in sicco subrevoluta), integra, venis obscuris, 8–10 paribus, petiolis 7–10 mm. longis. Flores solitarii, pedicellis glabris, ca. 1.5 cm. longis, tenuibus, ancipitibus; bracteis 2, oppositis, glabris, decurrentibus, crassiusculis, inaequalibus, margine glanduloso-denticulatis, bractea extera deltoidea, ca. 1.25 mm. longa, 0.75 mm. basi lata, intera deltoidea vel deltoideo-ovata, ca. 1.25 mm. longa, ca. 1 mm. basi lata; sepalis 5, imbricatis, inaequalibus, crassatis, rotundatis vel subrotundatis, exterioribus duobus ca. 4 mm. longis et 3.5 mm. latis, subconcavis, margine glanduloso-denticulatis, interioribus tribus concavis, margine leviter glanduloso-denticulatis vel integerrimis, 4–5 mm. longis, 4–5 mm. latis (4×4.2, 4.8×5, 5×5 mm.); petalis 5, albis imbricatis, basi leviter connatis, odoratis, subaequalibus, subrotundatis, apice acre apiculatis, ca. 7 mm. longis, exterioribus duobus ca. 6 mm. latis, interioribus tribus 4–4.5 mm. latis, margine scariosis; staminibus 55–65, seriatis (ut videtur 3), glabris, basi ad corallam adnatis, longissimis (exterioribus) 5.5 mm. longis et brevissimis (interioribus) 3.5 mm. longis, filamentis 3–3.5 mm. longis (exterioribus) et ca. 1.5 mm. longis (interioribus), basi (2/3) dilatatis ad 0.5 mm. diametro, supra (1/3) constrictis, antheris ca. 2 mm. longis,

connectivo apice 0.5 mm. projecto; ovario conico, glabro, ca. 3 mm. longo et 2 mm. diametro, 2-loculato, loculis pauci-ovulatis. Fructus non visus.

Jamaica: portland parish: John Crow Mts., 2.5 miles southwest of Ecclesdown, alt. 2500 ft., *R. A. Howard and G. R. Proctor 14841* (Arnold Arboretum—Type; Institute of Jamaica—Isotype), Sept. 14, 1956 (tree 12 ft. high; leaves lighter below; corolla white, fragrance sweet and spicy; stamens cream-colored).

This new species is undoubtedly an isolated endemic, probably confined to the John Crow Mts. of Jamaica. This is not unusual since isolated endemism is quite common in the family. Its closest relative is *T. hartii*. In habit and leaf characters the two species are quite similar. However, the latter species can be separated from *T. howardiana* by the characters found in the larger flowers. In *T. hartii* the pedicel measuring 1.5–5 cm. long is much sturdier and generally considerably longer. The sepals measure 6–7 mm. in length with the petals (ca. 8 mm. long) barely showing beyond the sepals. On the other hand, in *T. howardiana* the pedicels are shorter and distinctly more slender. The sepals are smaller measuring ca. 4 mm. in length with the petals nearly twice as long (7 mm.) and extending conspicuously beyond the sepals.

A character, not generally observed in other species of *Ternstroemia*, is found in the filaments of the stamens of *T. howardiana*. The lower two-thirds of both the long and the short filaments are conspicuously dilated while the upper third is thread-like. In most species the entire filament is thread-like. This observation was made from both the dried material from the herbarium sheet and preserved material fixed in the field by the collectors.—harvard university, cambridge.

DISTRIBUTIONAL AND NOMENCLATORIAL NOTES ON GALIUM (RUBIACEAE)

Hugh H. Iltis

The following data are partly a by-product of preliminary work on the *Rubiaceae* of Wisconsin (Urban and Iltis, 1957) and partly a result of field work in Arkansas during 1955. I wish to thank G. N. Jones and M. Bergseng for the loan of specimens from the University of Illinois Herbarium.

1. **Galium brevipes** Fern. and Wieg.[1] in Indiana. "Flora near Lake Michigan," swampy ground, Forsythe, Lake County, Indiana, September 13, 1879, *E. J. Hill.* (In Herbarium, Univ. of Illinois).

In Wisconsin and Indiana at least, this species is clearly distinguishable from its relatives; there can be no doubt that the collection cited above is of this small, intricately-branched, northern taxon. Hill's collection from Forsythe (which is near the present Beverly Shores, Porter County (not Lake County!), directly on Lake Michigan) apparently came from a habitat very similar to the ones on the lakeshore in Wisconsin where *G. brevipes* occurs, namely from a moist or swampy swale behind the dunes. Although this species is not listed by Jones and Fuller (1955) for Illinois, it is likely that it once grew there, for its habitat, close to the cool lakeshore, has all but been obliterated by Chicago, Evanston and nearby cities. We may assume that *G. brevipes* has been extinct in Indiana for over 50 years, since the Umbach Herbarium at the University of Wisconsin, which contains perhaps 35,000 numbers mainly from the northern Indiana lakeshore, does not contain a single specimen of this taxon. Umbach was an unbelievably "voracious" collector, particularly in the area of the Indiana Dunes in northern Porter and Lake Counties, and it appears doubtful to me that in his decades of avid collecting he would have missed even so small a plant. Hill's collection of 1879 antedates not only Umbach's "hey days" by about 20 to 30 years but also the growth of Michigan City and of the Gary industrial area and the age of "Beach Cabins" with "improved" lots.

2. **Galium labradoricum** Wieg. in Illinois. Cedar Lake Bog near Lake Villa, Lake County, Illinois, June 3, 1942. *G. N. Jones 15221:* Marsh, 3 miles N. of Capron, Boone County, Illinois, 6/8/46. *E. W.* and *G. B. Fell* no. f *46344*, (Both U. of Ill. Herb.); swampy ground along Nippersink Creek, N. end of Wonder Lake 2.5 mi. NW. of Ringwood, June 15, 1947. *J. A. Steyermark 64533* (Chi. Nat. Hist. Mus.).

This species is not listed by Jones and Fuller (1955) because the first two cited specimens were identified and presumably

[1] **Galium domingense,** nom. nov., *Galium brevipes* I. Urban, Symbolae Antillanae 7: 415. 1912, not *Galium brevipes* Fern. & Wieg. RHODORA 12: 18. 1910. Urban's homonym refers to an endemic species of Haiti and Sto. Domingo, of which I have seen a specimen in the Missouri Botanical Garden Herbarium (*Valeur 729*). It proves to be a highly distinctive annual with minute leaves, and a 4-parted, pink corolla.

mapped as *G. obtusum* Bigel., a closely related species, of which *G. labradoricum* appears to be a specialized northern derivative, while the last specimen was annotated by the Austrian monographer of *Galium*, F. Ehrendorfer, as *G. tinctorium*! These stations, being in northernmost Illinois, fit in well with those in Wisconsin, where it occurs scattered through most of the state, with its occurrence in Indiana, where Deam (1940) shows it in eight of the twelve northernmost counties, and with the one station in North-central Iowa (Leyendecker, 1941).

3. **Galium texanum** A. Gray in Arkansas. Top of southern arm, Horseshoe Mountain (Little Short Mountain), 6 mi. W.N.W. of Paris, S.E. Franklin County, Arkansas. (93° 49′ W.; 35° 19′ N.). Elev. 1,000 ft. June 10, 1955. *Hugh and Grace Iltis 5412.*

The above collection came from a steep, dry, rocky and sandy, south-facing *Juniperus-Celtis* glade, only about 5 yards from the upper edge of the vertical sandstone cliffs (Savanna Sandstone-Upper Pennsylvanian), high above the Arkansas River Valley on the S. E. edge of flat-topped, mesa-like Horseshoe Mountain. *Galium texana* grows there, straggling under bushes in grass, amidst *Opuntia* sp., *Monarda fistulosa* var. *mollis*, *Hypericum pseudomaculatum*, *Valerianella longiflora*, *Astranthium integrifolium*, *Spermolepis echinata*, *S. divaricata*, and *Tragia urticifolia*. Like the associated taxa, *G. texanum* is a southern species, previously known only from Texas and Oklahoma (Hopkins, 1943). The closest stations in the latter state are in Comanche Co., about 300 miles from the Arkansas station. Specimens have been deposited in the Herbaria of the Univ. of Wisconsin, Univ. of Arkansas, Southern Methodist Univ. and Pomona College, and in the Gray Herbarium.

I would like to thank Dr. L. H. Shinners for verifying the identification.

4. **Galium boreale** L. ssp. **septentrionale** (Roem. and Schult.) Iltis, comb. nov. Based on *Galium septentrionale* Roem. and Schult. Syst. Veg. **3:** 253. 1818. *Galium boreale* L. of all American authors, including its varieties, not *G. boreale* L. *sensu stricto.*

Löve and Löve (1954) clearly demonstrated that the American and eastern Asiatic form of *Galium boreale* L. *sensu lato* differs from the Eurasian form by several minor morphological characters (larger flowers, anthers and fruits, more pubescent nodes,

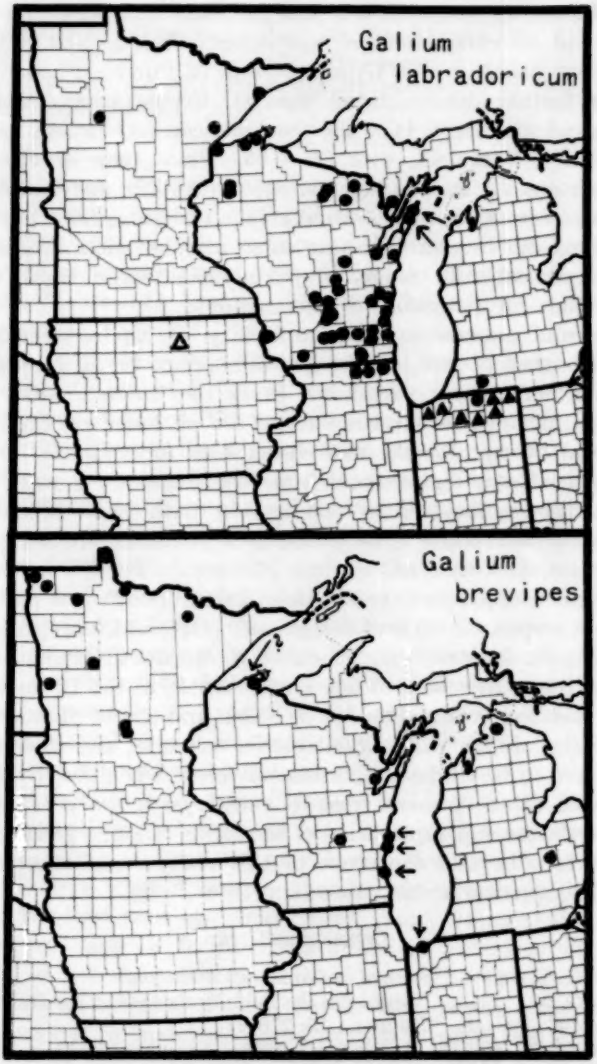

FIG. 1. Distribution of *Galium brevipes* and *G. labradoricum* in Wisconsin and nearby states. Dots represent specimens examined by the author in the herbaria of the Univ. of Wisconsin, Illinois, and Minnesota, Chicago Natural History Museum and Missouri Botanical Garden. Solid triangles represent collections cited by Deam (1940), the triangle the report of Leyendecker (1941).

and differently shaped bracts and panicles), and suggested that it should be called *Galium septentrionale* Roem. and Schult., a species based on the *Galium boreale* of Pursh's Flora. The Löves further demonstrated that *G. boreale sensu stricto* is tetraploid with 2n = 44, while the American and eastern Asiatic material is hexaploid, with 2n = 66. Since their distribution map shows a clearly allopatric supplementary distribution of the two forms, such as is usually found in subspecific entities, the forms furthermore showing some morphological overlap, it seems advisable to reduce the American-Asiatic taxon to a geographic subspecies of the Eurasian one.

In fruit pubescence, the variability of ssp. *septentrionale* parallels that of ssp. *boreale*, and appears to be an interesting case of homologous variation. Since the *varietal* names currently used for the American forms are all based on European material of ssp. *boreale*, new varietal or form names for the variants of ssp. *septentrionale* must be found since such have never been published in conjunction with that subspecies. *Galium septentrionale* is described as a pubescent-fruited plant. Which of the two types of fruit pubescence Pursh's specimens show is not apparent from the description, though it is probable but not certain that it is of the sparsely pubescent form presently called var. *intermedium*. Should the Japanese plants of *G. boreale* prove to belong to ssp. *septentrionale*, as the Löves maintain, then four varietal names of Nakai and one of Maximowicz (cf. Nakai, 1939) will be available for our taxa, and their types will have to be studied. Because of these difficulties, I am not prepared at the present time to wrestle with the problems of nomenclature and typification of the forms of ssp. *septentrionale*, which falls beyond the scope of this study.—DEPARTMENT OF BOTANY, UNIVERSITY OF WISCONSIN.

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THE MISUSE OF THE TERM TAXON:—Dr. H. J. Lam, of the Rijksherbarium, Leiden, invented the neo-Greek word taxon (plural taxa), but he may live to regret the day. It was intended purely as a nomenclatural tool to replace the cumbrous expression "taxonomic group" that was formerly used in the International Rules of Botanical Nomenclature. The term was first proposed to the Symposium on Nomenclature called the "Utrecht Conference" that was held prior to the Seventh International Botanical Congress in Stockholm in 1950; it was adopted unanimously by the Conference, as reported in Chronica Botanica.[1] It seemed a happy idea at the time; this simple term facilitated the work of the Editorial Committee in drawing up the new wording of the International Code that resulted from the Stockholm Congress; and it also had the advantage of being usable internationally.[2] Some of the Rules of Nomenclature apply specifically only to families, or to genera, or to hybrids or other groups, whereas others apply to all groups equally, and it is here that the term taxon finds its legitimate use, as for example in Article 46: "A name of a taxon is not validly published when it is merely cited as a synonym." Taxon here denotes *any* nomenclatural category.

To say that the word taxon "caught on" is to put it mildly. It has spread like wild-fire until now, only eight years after its invention, every student not only knows the word but thinks that he knows what it means—that is, just practically everything. We now read of "short-haired taxa," "taxa that grow in swamps," and so forth. This unlimited extension of the meaning is not only ridiculous, it is worse, not precise. To use the word to mean plants, populations, races, species, or what have you, is to debase it and to turn it into a meaningless catch-all. It should be kept clearly in mind that a taxon is an abstraction and that it does not have leaves nor does it

[1] Vol. 12, p. 12. 1950.

[2] And so it has proved; some Latin American botanists have adopted it into Spanish so fervently that they are giving it the plural "taxones."

grow anywhere at all in the world. Where the words "taxonomic group" can not be appropriately substituted, the word taxon is misused. Let us return to the original meaning before it is too late, and use taxon only in technical nomenclatural discussions, except of course when we wish to refer to our notable international journal.—C. V. Morton, U. S. National Museum, Washington, D. C.

Arctium in Illinois.—Among weedy species of plants in Illinois *Arctium minus* Schk. has been collected and observed through the length and breadth of the state. Reports of the occurrence of this introduced Eurasian weed are not surprising, but records of *A. lappa* L., and a first collection for the state of *A. tomentosum* Mill. may be of interest.

At the present time four Illinois collections of *A. tomentosum* Mill. are known. Mr. R. T. Rexroat of Virginia, Illinois, is apparently the first collector of this burdock from Cass and Morgan counties. Mr. Rexroat has supplied specimens, which are deposited in Illinois State Museum Herbarium, and has furnished the following description: "Plants one and a half to two feet tall, with several stems from the base, but without large leaves, petioles hollow and involucre arachnoid. These plants flowered a week or ten days before *A. minus* Schk." The following collections are cited: Cass Co.: June 15, 1956, southwest of Ashland in a pasture, *R. T. Rexroat 2847, 2848.* Morgan Co.: June 15, 1956, northwest of Prentice in a pastured area, *R. T. Rexroat 2849, 2850.*

There are probably not more than half a dozen Illinois collections of *A. lappa* L. on record and the following may be cited: Cook Co.: Aug. 16, 1903, roadsides and borders of woods, *O. E. Lansing 1841.* DuPage Co.: July 28, 1953, waste place east of Wheaton, *R. A. Evers 40006.* Knox Co.: Aug. 16, 1952, field border 4 miles west of Victoria, *R. A. Evers 35568.* Sept. 22, 1954, roadside north of Galesburg, *G. S. Winterringer 11265.* McHenry Co.: Sept. 15, 1948, roadside near Richmond, *R. A. Evers.* Vermilion Co.: August 31, 1956, railroad embankment nine miles west of Hoopeston, *G. S. Winterringer 12791, 12792.*—Glen S. Winterringer, Illinois State Museum, Springfield.

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